


Designing

Web Pages

Objectives

- ▶ Understand design principles
- ▶ Examine Web-specific design issues
- ▶ Explore cross-platform issues
- ▶ Integrate fonts and color
- ▶ Incorporate images effectively
- ▶ Locate Web design resources
- ▶ Design an accessible Web page
- ▶ Explore Web writing guidelines
- ▶ Study usability factors

Understanding how to create a well-designed Web page is the key to attracting users and making a functional Web site. It is not a requirement that Web designers be graphic design professionals, but creating effective Web pages requires some understanding of universal design guidelines and the unique design advantages and challenges that the Web poses.  Jaime Chavez works in the Information Systems department at Nomad Ltd, a travel and sporting goods company. He has worked with the IS team to create a company Web site. They consult with the company's graphic design department, as well as Web page-specific design resources on the Web, to critique their original design and to get tips on increasing the site's usability.



Understanding Design Principles

When planning a graphic design, what you leave out is often just as important as what you include. While you can use graphics as well as font face and color variations to make a layout more interesting than a page of plain text, moderation is essential. Using too many layout elements makes the page overwhelming and leaves users unclear about its point. Finding a judicious balance between plainness and overuse of formatting elements is key to the effectiveness of any Web page design. Jaime's colleagues from the graphic design department share their basic design guidelines. Figure G-1 shows an effective layout that incorporates the following tips:

Details



Use active white space

The term **white space** refers to any empty part of a page. While you want to avoid leaving large areas of unused space that don't serve a purpose for your design—known as **passive white space**—it also is important not to entirely eliminate white space. An empty zone deliberately placed between page elements—known as **active white space**—reinforces their separateness, and helps the user mentally group the page into sections.



Choose complementary colors and fonts, and limit their number

You can control color in several types of Web page elements: page background, table background, text, and graphics. Colored text can highlight main ideas or important points, or make text easier to read. As with white space, you also can use different colors and fonts to indicate separate ideas or sections in your layout. It's best to limit colors and fonts to two or three per page, and to be sure that those you select complement each other. In order for differences in colors and fonts to have maximal impact, you should use them sparingly so that each occurrence isn't cancelled out by others surrounding it.



Ensure content legibility

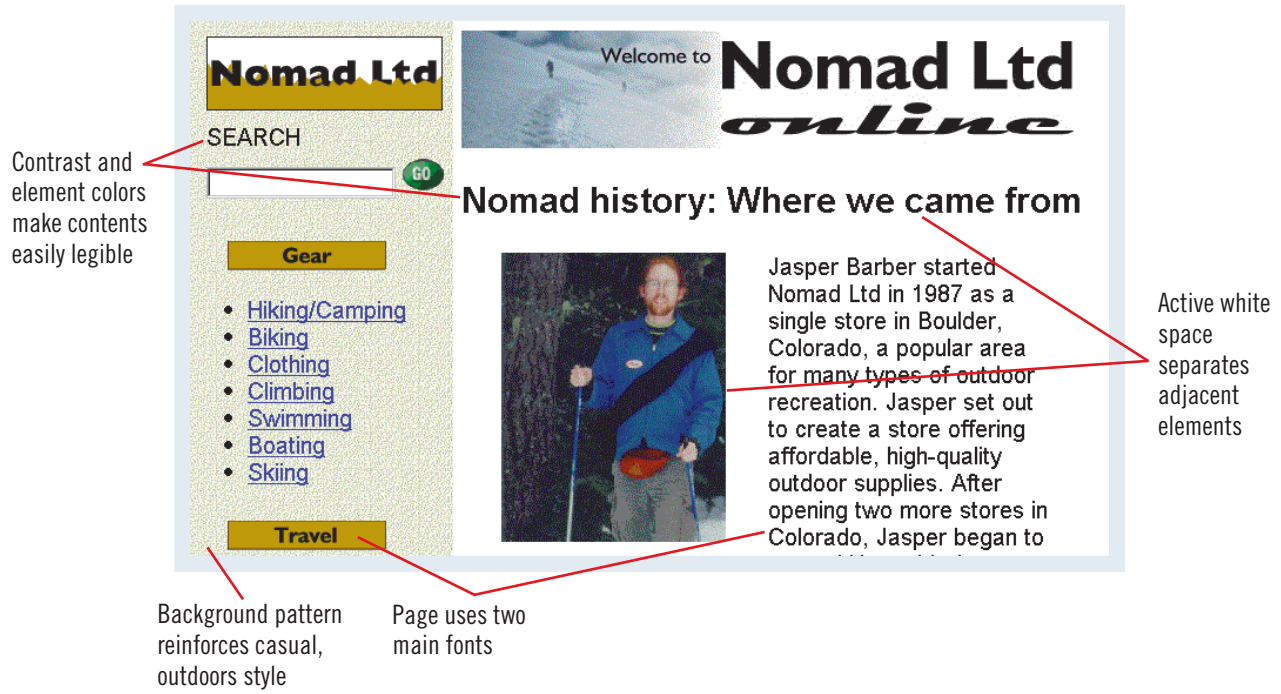
Regardless of the design you choose, it's important that users can read a page's contents. Legibility is a factor in the selection of each page component—choose font sizes that aren't illegibly small; avoid colors that are difficult to focus on (such as fuchsia); and use images that aren't too bright or too dark. Legibility also is a factor in combining page elements. When you deviate from the default black text on a white page, it's important to select font and background colors that produce legible text. If you choose to use an image as the page background, you need to ensure that the image provides an appropriate contrast for all page contents.



Use a style that fits the message

In addition to testing the design merits of each page element, you need to ensure that all components of your layout reinforce the page's message. For example, the appropriate font face, page colors, and graphics for a business presentation would be quite different from those describing a Mardi Gras festival.

FIGURE G-1: Web page implementing basic design elements





Examining Web-Specific Design Issues

In addition to design guidelines that apply to traditional media, Web page designers need to consider issues that are particular to the Web medium. Although Web pages can resemble traditional media, there are two significant differences. Unlike a magazine page, for example, a Web browser window is wider than it is tall. This requires a different layout. Additionally, Web users interact with Web pages, rather than just look at them; as a result, Web pages require additional planning. Whatever constraints it imposes on design, however, the Web's flexibility also offers designers significant advantages. In their research on the subject, members of the Nomad Web-design team find three main features of Web design that have unique advantages and requirements. Figure G-2 shows a Web page with contents that are not optimized for the Web. However, the Web page in Figure G-3 conforms to many aspects of the three features, which are:

Details

QuickTip

The smallest display resolution is 640 x 480; however, the vast majority of Web users view pages at a resolution of 800 x 600 or greater. If your Web page contents can comfortably fit in this smaller size, or if your audience is likely to be using older computer equipment, test your pages at 640 x 480 to ensure usability.



Web users

Studies have found that Web users generally know what they're looking for, and have little patience for sites that don't immediately look useful. While this finding suggests that users subject your Web site to a snap judgment, you can use this information to design your site so that it makes the cut. While keeping the page uncluttered, **make the site's contents obvious and easily accessible from every page**; one or two well-planned navigation bars efficiently accomplishes this. You should **limit the length of a Web site's home page** to what fits in most browser windows (800 x 600 pixels), so that users can locate the information they want without scrolling. Most readers are used to reading text in newspaper or magazine layouts. For this reason, it also is important to **limit paragraph length**, as users generally scan, rather than read entire Web pages.



Web browsers

Although some of the principles are similar, a Web browser presents a layout medium that is quite different from traditional print media. Unlike magazines and newspapers, **a Web page appears wider than it is tall**. Therefore, your layout should use the width of the page, rather than its length. For text content such as news stories and editorials, however, print media legibility rules apply. Therefore, **paragraphs of text should appear in narrow columns**. Because the Web is a dynamic medium, **each user's browser affects the appearance of your layout**, so it is vital to test your Web pages on different browser brands, browser versions, operating systems, and screen resolutions.



Web medium

The Web itself as a medium presents design advantages and challenges. Because users access Web pages over various types of Internet connections, it's important to **keep the size of your HTML and associated files as small as possible**, to minimize user wait time. Also, Web pages are not static documents published once, like magazines and newspapers. Rather, Web pages always give readers the impression that they are always viewing new documents. **You must schedule and budget regular updates to your Web site** in order for it to maintain its level of integrity. Finally, because Web pages are dynamic, and interpretation varies across interfaces, users with disabilities can access Web pages using specialized interfaces. To ensure such accessibility, you need to **use HTML code that is as widely interpretable as possible**—for example, use `..` instead of `<I>..</I>`.

FIGURE G-2: Web page lacking Web design aspects

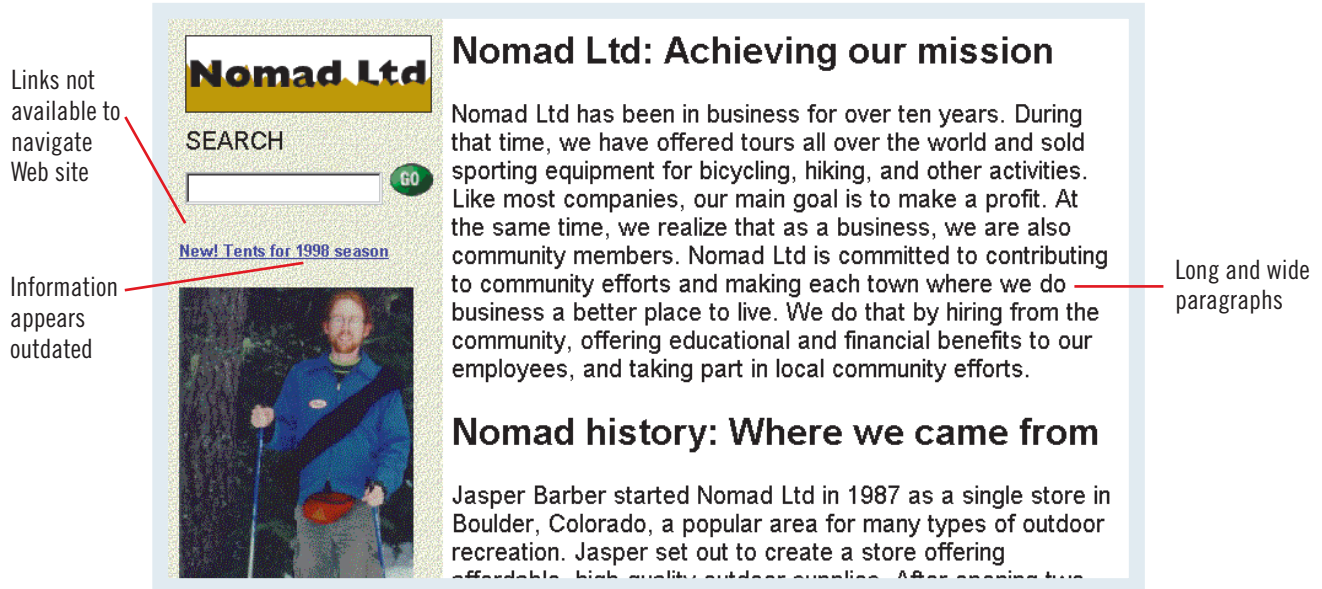
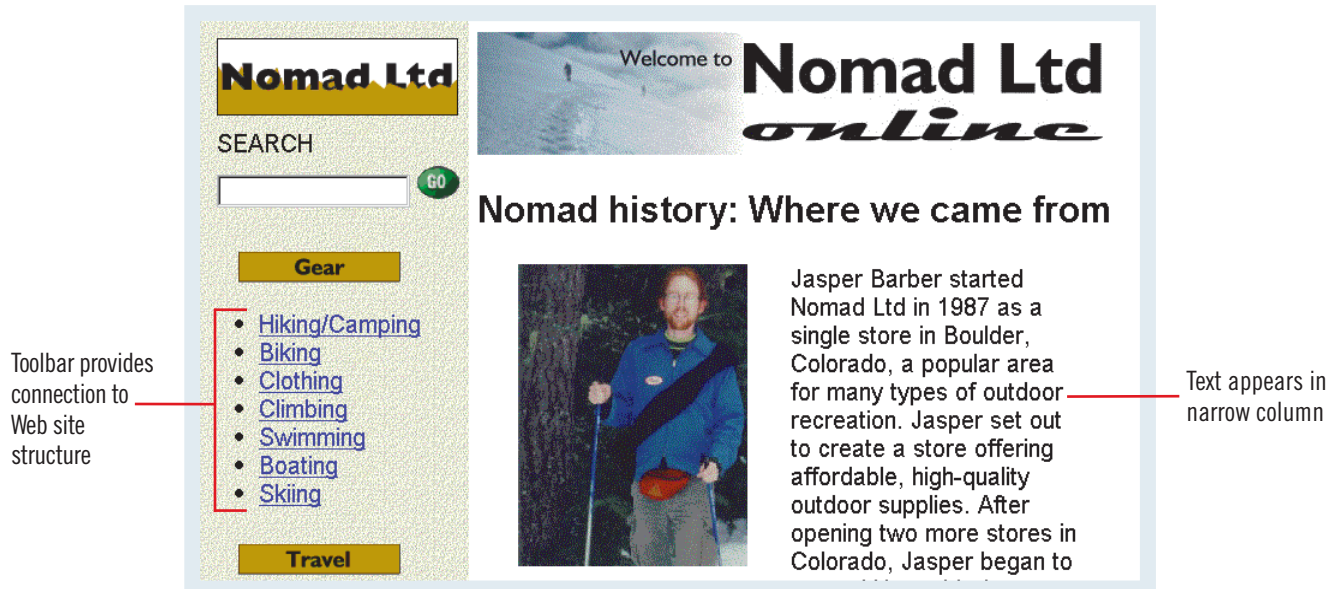


FIGURE G-3: Web page design optimized for the Web





Exploring Cross-Platform Issues

Regardless of how carefully you design a Web page, certain computer setups can render the same HTML differently. Source interpretation varies among browser brand, browser version, and operating system. Additionally, a computer's screen resolution can affect what each user sees on the screen, and how each element is aligned on the page. Therefore, it is important to test your Web pages using as many variations as possible of all of these factors—characteristics that are collectively known as a user's **platform**. To give the Nomad Web development team a flavor of the differences among user platforms and screen resolutions, Jaime opens a page that was not designed for cross-platform compatibility in different browsers and screen resolutions. He also outlines the specific appearance issues across platforms and displays:

Details



Browser interpretation

Although industry standards for each version of HTML are issued by an independent organization, the W3C (World Wide Web Consortium), in practice it's rare for browsers to fully comply with these standards. As a result, each browser brand supports different subsets of each version of HTML, and may interpret the features differently, as shown in Figure G-4. As long as different browsers and operating systems are available among Web users, Web page design will continue to require care, experimentation, and extensive testing in order for pages to appear similarly across platforms. Up-to-date information on the most widely used browsers—and the deficiencies of each—is important knowledge for Web design.

QuickTip

If it is likely that your Web page audience will be using older equipment, you may want to design pages compatible with the lowest possible resolution of 640 x 480. However, few Web users use such monitors.



Screen resolution

You can safely bet that a Web page does not appear on your screen exactly as all other readers see it. The reason is that monitor **resolution**—the screen's display dimensions (width by height, in pixels)—varies, depending on a user's monitor and computer hardware. Common resolutions include 800 x 600, 1024 x 768, and 1280 x 1024, with some platforms capable of displaying even larger areas. Figure G-5 shows the same Web page at these three resolutions. Notice that as the resolution increases, more of the page is visible in the browser window. Extremely large screen areas add blank space around the layout. Designers usually create Web pages that consistently appear at different resolutions by using a centered layout table no wider than the lowest common resolution—800 pixels.



Image display

Almost all Web users use one of two main types of computers: the Apple Macintosh, or the IBM-compatible PC. The two are virtually indistinguishable to Web page designers, except in one area: images. Among the many properties of a digitized image file are **gamma settings**, which specify the degree of contrast between midlevel gray values. The Mac and the PC have different standard gamma settings for their displays; this can cause the same image to appear noticeably different on the two platforms. An image with heavy contrast on a Macintosh may look very dark on a PC, whereas high-contrast Windows images may look flat and washed out on a Macintosh. Web designers generally split the difference, using images with a setting mid-range between the Mac and PC.

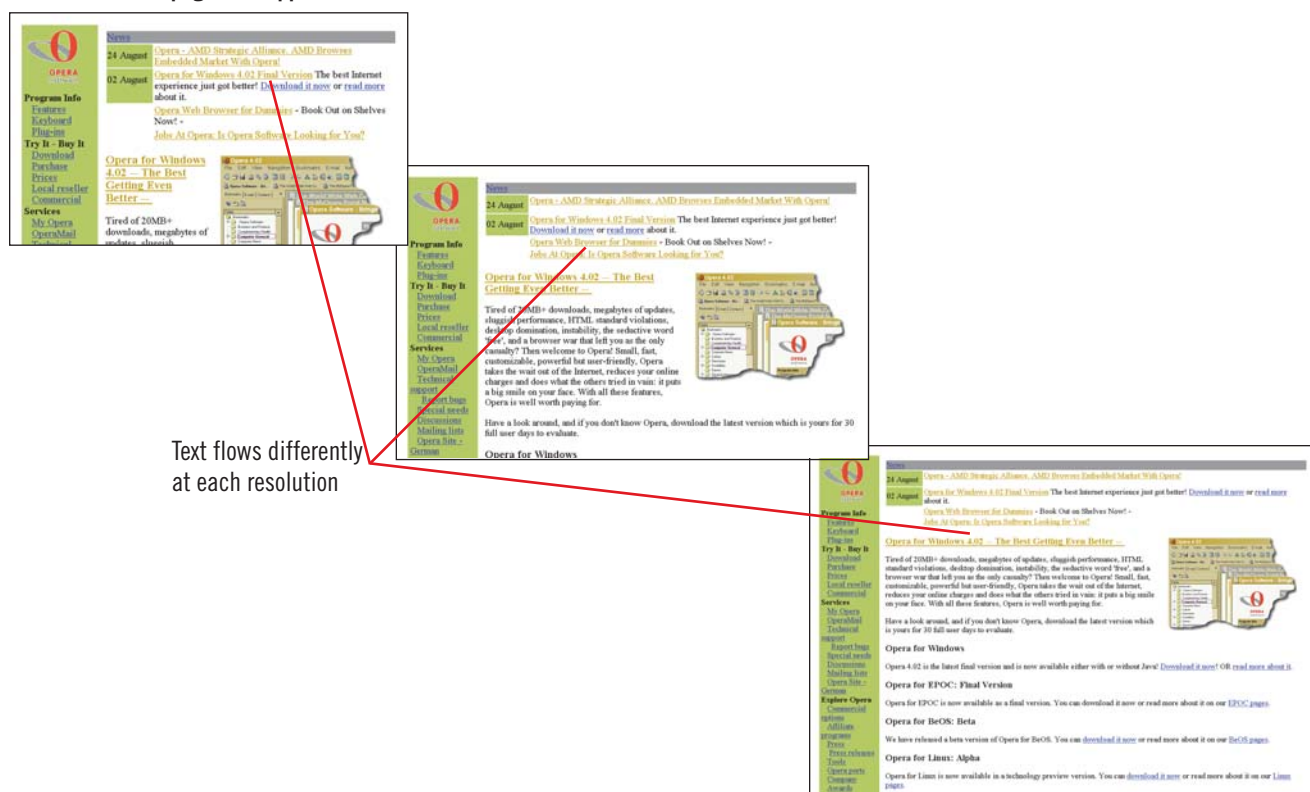
FIGURE G-4 : Web page as it appears in three different browser versions



Graphic positioned differently

Background color interpreted differently

FIGURE G-5: Web page as it appears at three different screen resolutions



Text flows differently at each resolution




Designing Web pages for handheld device users

In addition to considering different computer platforms when designing a Web page, you can further broaden a page's audience by making the page viewable on other sorts of devices. WebTV is one such platform, but this system—which integrates Internet functions into a television—is not widely used. Another audience that is growing quickly, however, is

users of handheld devices such as cell phones and personal digital assistants (PDAs). Browsers for such devices generally can render a subset of standard HTML codes. Because of their small screen sizes (usually from 160 x 160 to 240 x 320) and the prevalence of monochrome displays, page layout and content must be optimized for these devices.



Integrating Fonts and Color

Formatting text with different font faces and colors is one of the simplest design aspects to implement. For this reason it's especially important to be cautious and thoughtful when adding these features to a Web page. You should limit each page's text to two or three fonts and two or three colors. Additionally, most of the text should use one standard font and color—others should be used for small, specific applications that help users identify related page elements.  The Web design team recently added three new categories to the Nomad Ltd Web site plan. Jaime adds them to the navigation bar in the development template and uses a special font and color to draw attention to them.

Steps 1234

1. Start your text editor, open the file **HTM G-1.htm**, then save it as a text document with the filename **nomad-g.htm**

This Web document is the template for adding Web pages to the Nomad Web site.

2. Scroll down to the unordered list beginning with the item "Hiking/Camping", click at the end of the line containing the list item Clothing, then press **[Enter]**

3. Press **[Spacebar]** eight times, then type **Fitness**

4. Click at the end of the line containing the list item Skiing, press **[Enter]**, press **[Spacebar]** eight times, then type **Guidebooks**

Jaime added new list items for the Fitness and Guidebooks categories.

QuickTip

The code ` ` adds a space; HTML inserts only one space between letters or page elements unless you use this code to specify extra spaces.

5. Click at the end of the line containing the list item Fitness, then type ** NEW**

Jaime adds two spaces after the linked text, then inserts the word NEW in an emphasized (italic) font and blue-green font color.

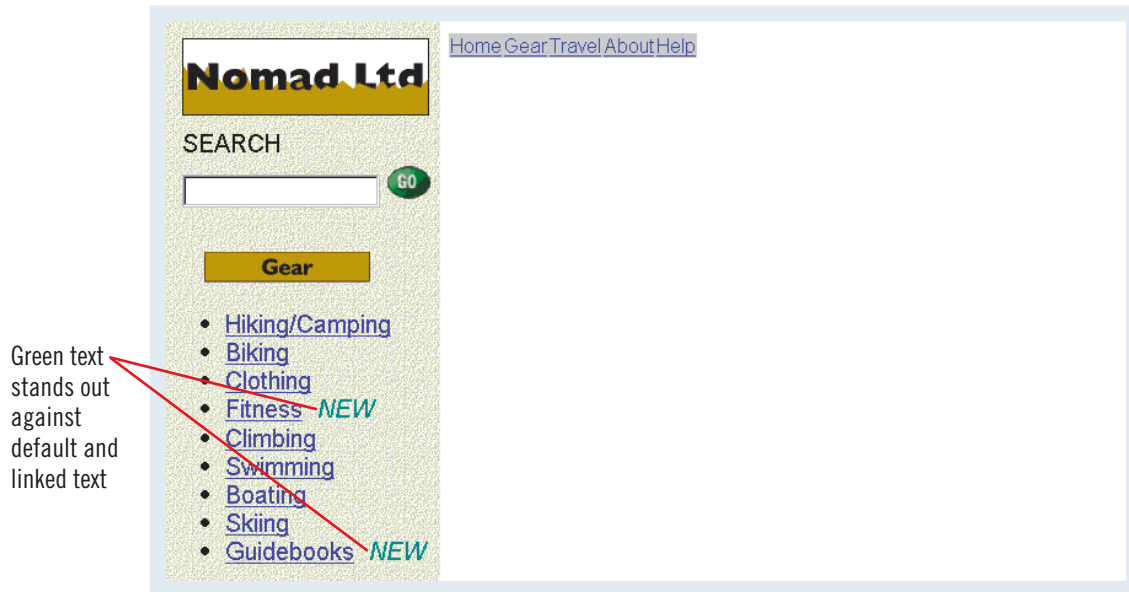
6. Repeat Step 5 for the line containing the Guidebooks list item, then save your work
Your Web page code should resemble the document shown in Figure G-6.

7. Start your Web browser, cancel any dial-up operations, then open the file **nomad-g.htm**
As shown in Figure G-7, the two new choices appear in the navigation bar, along with the colored and italicized text NEW. This text highlights the new options for users who may already be familiar with the site.

FIGURE G-6: Web page code selectively implements text color



FIGURE G-7: Web page template incorporating text color




Formatting text with style sheets

The HTML specification includes a simpler alternate method for formatting text and other page elements; the method is called **Cascading Style Sheets** (or **style sheets** or **CSS** for short). Style sheets allow you to specify settings as attributes for more than 50 properties of any page element, rather than requiring separate tags. Additionally, you can specify a named group of settings in a document's header section, and then apply the specified settings by referencing that name in any page element's opening tag. Style sheets facilitate tight

formatting control of page elements with a minimum of extra code, and can help to ensure an exact match of the settings for different page elements. Style sheets are not yet widely used for Web page creation because the most popular browsers do not uniformly support them. However, as browser support becomes consistent and widespread, style sheets will replace tags such as `` and ``, and attributes such as `ALIGN`, for Web page formatting.

Incorporating Images Effectively

Just as effective Web designs benefit from limited use of text color and font variation, you can strengthen your Web pages by keeping the use of graphics thoughtful and sparing. Graphics draw readers' attention and contribute to a page's mood—strong benefits of including graphics in a layout. However, using too many graphics on a page, especially unrelated ones, overwhelms users and prevents them from focusing on the most important part of the page. Also, because many Web users rely on relatively slow Internet connections via modems, minimizing the number of graphics in a Web page is vital to ensure relatively quick downloads.  The Nomad Web design team is considering making the product category list in the navigation bars context-specific, so that the list only contains options relevant to the contents of the page on which it appears. To set up a model of this idea for evaluation, Jaime creates a second horizontal navigation bar that will appear at the top of the screen. This new bar contains options users will need, regardless of which page in the site they open.

Steps 1 2 3 4

QuickTip

Although the closing `</TD>` tag is not officially required, it can be useful in preventing browser errors when creating nested tables.

1. In your text editor, scroll down to the second column in the page's structuring table, select the text `<!-- HORIZONTAL TOOLBAR ICONS -->`, then press **[Delete]**
2. Press **[Spacebar]** ten times, then type `<TD WIDTH="108" HEIGHT="55">

</TD>`
3. Press **[Enter]**, press **[Spacebar]** ten times, then type `<TD WIDTH="108">
</TD>`
4. Repeat Step 3 three times to enter the remaining three lines of code shown in Figure G-8
Figure G-8 shows the completed code that adds the icons to the horizontal toolbar.
5. Save your work, open your browser, then reload the file **nomad-g.htm**
As shown in Figure G-9, the horizontal toolbar appears along the top of the Web page. Each icon is small, minimizing the page's download time. The icons are similar in shape and appearance, which suggests their relatedness without distracting users from other parts of the Web page.

FIGURE G-8: Web page code implementing small, related graphics

```
<!-- second column -->

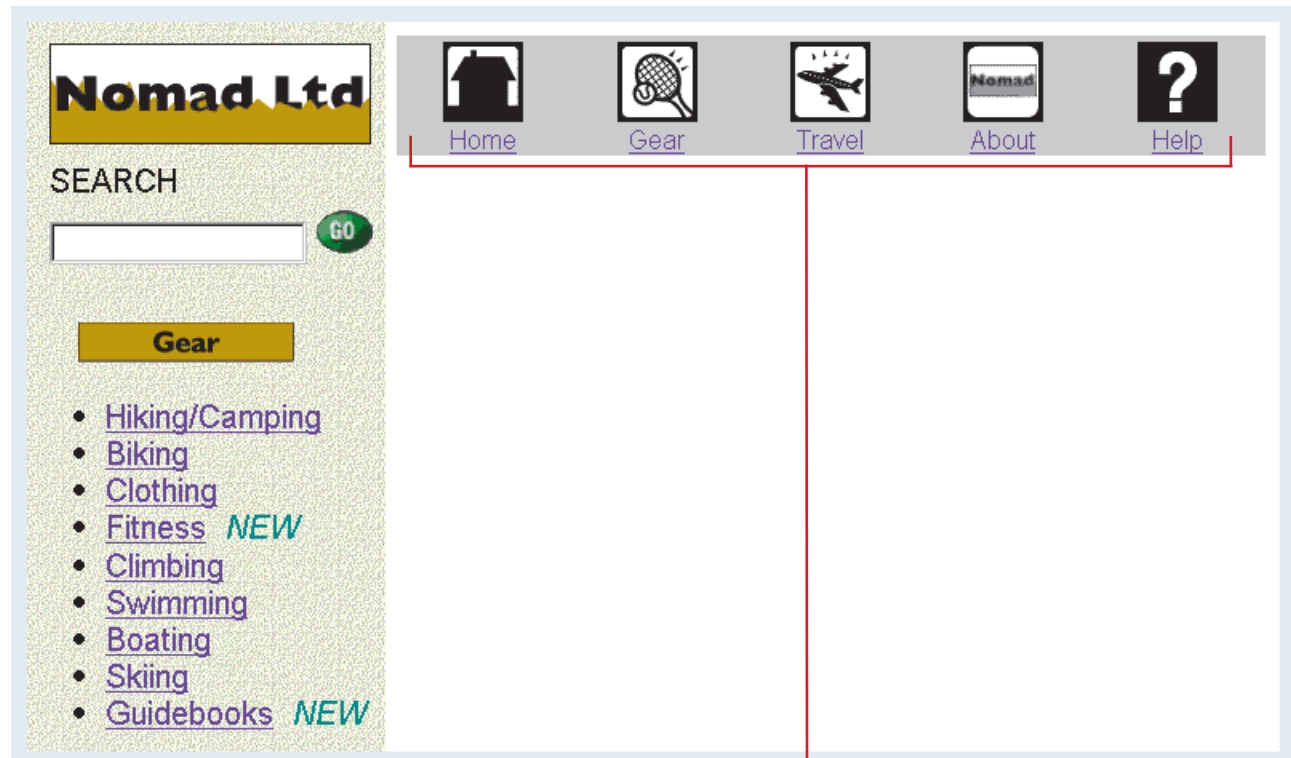
<!-- horizontal navigation bar -->

    <TD UALIGN="top" HEIGHT="275" WIDTH="550"><FONT FACE="arial, helvetica,
    sans serif">
        <TABLE BGCOLOR="#C0D9D9" CELLSPACING="0" BORDER="0">
            <TR ALIGN="center" UALIGN="bottom">
                <TD WIDTH="108" HEIGHT="55"><IMG SRC="images/homeic.gif" WIDTH="50"
                HEIGHT="50" ALT="Home"></TD>
                <TD WIDTH="108"><IMG SRC="images/gearic.gif" WIDTH="50" HEIGHT="50"
                ALT="Gear"></TD>
                <TD WIDTH="108"><IMG SRC="images/travelic.gif" WIDTH="50"
                HEIGHT="50" ALT="Travel"></TD>
                <TD WIDTH="108"><IMG SRC="images/aboutic.gif" WIDTH="50" HEIGHT="50"
                ALT="About"></TD>
                <TD WIDTH="108"><IMG SRC="images/helpic.gif" WIDTH="50" HEIGHT="50"
                ALT="Help"></TD>
            </TR>

            <TR ALIGN="center">
                <TD><FONT FACE="arial, helvetica, sans serif" SIZE="-1"><A
                HREF="construction.htm">Home</A></TD>
                <TD><FONT FACE="arial, helvetica, sans serif" SIZE="-1"><A
                HREF="construction.htm">Gear</A></TD>
                <TD><FONT FACE="arial, helvetica, sans serif" SIZE="-1"><A
                HREF="construction.htm">Travel</A></TD>
```

Code for Horizontal
navigation bar icons

FIGURE G-9: Web page template selectively incorporates graphics




Graphics add
functionality
without distracting



Locating Web Design Resources

While you're familiar with the general design guidelines required by all Web pages, many other suggestions are useful or important depending on a page's contents, audience, or goal. Additionally, as Web technologies and languages evolve, it's important to stay current with the consensus on how to effectively use them. Fortunately, design guidelines are abundant on the Web itself. You can use a search engine to research relevant design pointers for your Web pages.

 Jaime reviews a few main categories of design resources with the Nomad Web design team, and describes their uses.

Details



Web design articles

The Web contains many sites that focus on HTML and related technologies and regularly add new articles and news. These sites, such as the one shown in Figure G-10, are a great way to keep current on design trends. They also provide advice from experienced designers, and can quickly bring you up to speed on industry conventions.



Style guides

Many large organizations—such as corporations and universities—include their Web design guidelines on their Web sites. While these guides, such as the one shown in Figure G-11, generally contain rules that members of the particular organization must follow when creating Web pages, they can shed light on the reasons some organizations use or avoid specific formatting or elements in their designs. By examining several such guides you also can get a sense of which style rules are in common use on the Web, and which are specific to an organization's image or its internal practices.



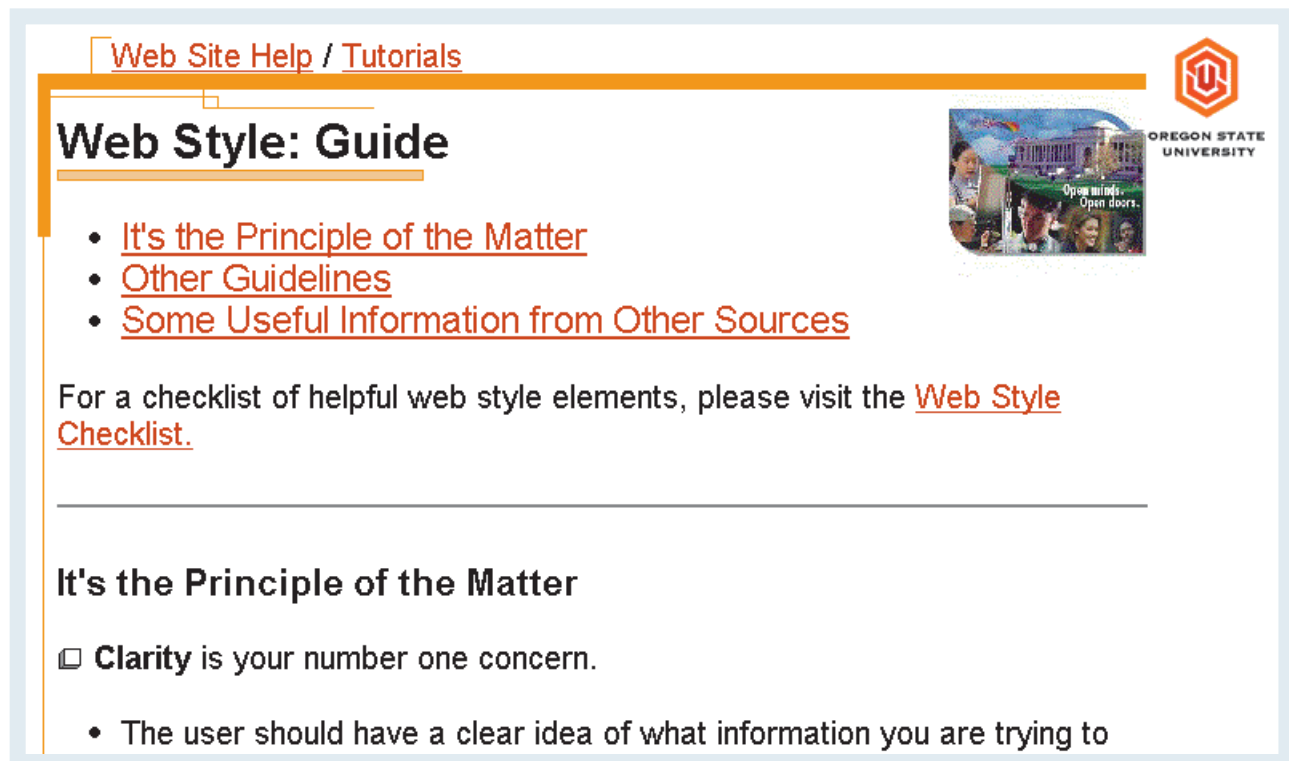
Existing Web sites

Another valuable source of design ideas is the sites you visit as a Web user. As you read the news, shop, research information, or check e-mail messages on the Web, pay attention to the design of each page that opens. When you find an interesting design, you can check the page code to see how it was created. You also should try to find other Web pages that use the same design; if you are unable to find any, there may be a good reason why other sites haven't implemented the design.

FIGURE G-10: Web design resource featuring regular articles



FIGURE G-11: Web style guide



Designing an Accessible Web Page

Careful planning and implementation of your Web page design can benefit the page's usability in several ways, such as producing a clearer and more focused visual layout. Additionally, close attention while designing your pages can help ensure that your pages are accessible for Web users with disabilities, including blindness, color blindness, and cognitive or learning disabilities. Although lists of specific areas to check are widely available on the Web, accessibility guidelines stem from three main requirements: the appearance or perception of color should not be necessary for interpreting information; all page elements should make sense when vocalized by a machine, rather than viewed on a screen; and the content should be clear and logically organized. Verifying that your pages meet these tests helps ensure their availability not only to people with disabilities, but also to Web users with older displays or browsers. Jaime reviews the Nomad site template shown in Figure G-12 against a list of the main accessibility guidelines to make sure he hasn't overlooked anything. He verifies that:

Details



Images and multimedia include alternate text

Specifying alternate text using the ALT attribute for graphics and multimedia provides a key means of translating visual or aural information into a format that many devices can interpret. Alternate text can provide a description of a sound file, or explanatory text that is vocalized by a Web interface device for blind users. Jaime included a description of each icon in the template, using the ALT attribute.

QuickTip

The default HTML format for textual links illustrates this guideline well: links appear in blue—a cue based on color—but also are underlined.



Color differentiation is not required for viewing any part of the page

A popular visual design strategy applies color to selected layout elements to indicate a common meaning or similarity. For example, the text NEW in Jaime's vertical navigation bar appears in green, to differentiate it from neighboring text. Because some readers are unable to perceive differences in color—or may be using a monochrome display—you should not rely on color differences as the only formatting distinction between different types of information. Because it also is italicized, Jaime's NEW text remains distinguishable when viewed without color.



Headers in data tables are correctly formatted

When read aloud by a Web interface for the visually impaired, tables should still be able to convey the information expressed in their visual formats. It's important to format cells in the header row with the <TH> tag—and equally important not to use this tag for other cells in the table, even if their contents should be formatted as boldface and centered.



Table contents make sense if read row by row

Some older browsers and other Web interfaces have difficulty organizing text that wraps to multiple lines within a table cell. Ideally, cell contents in a data table should cover only a single line.



Link text doesn't rely on its context to indicate its function

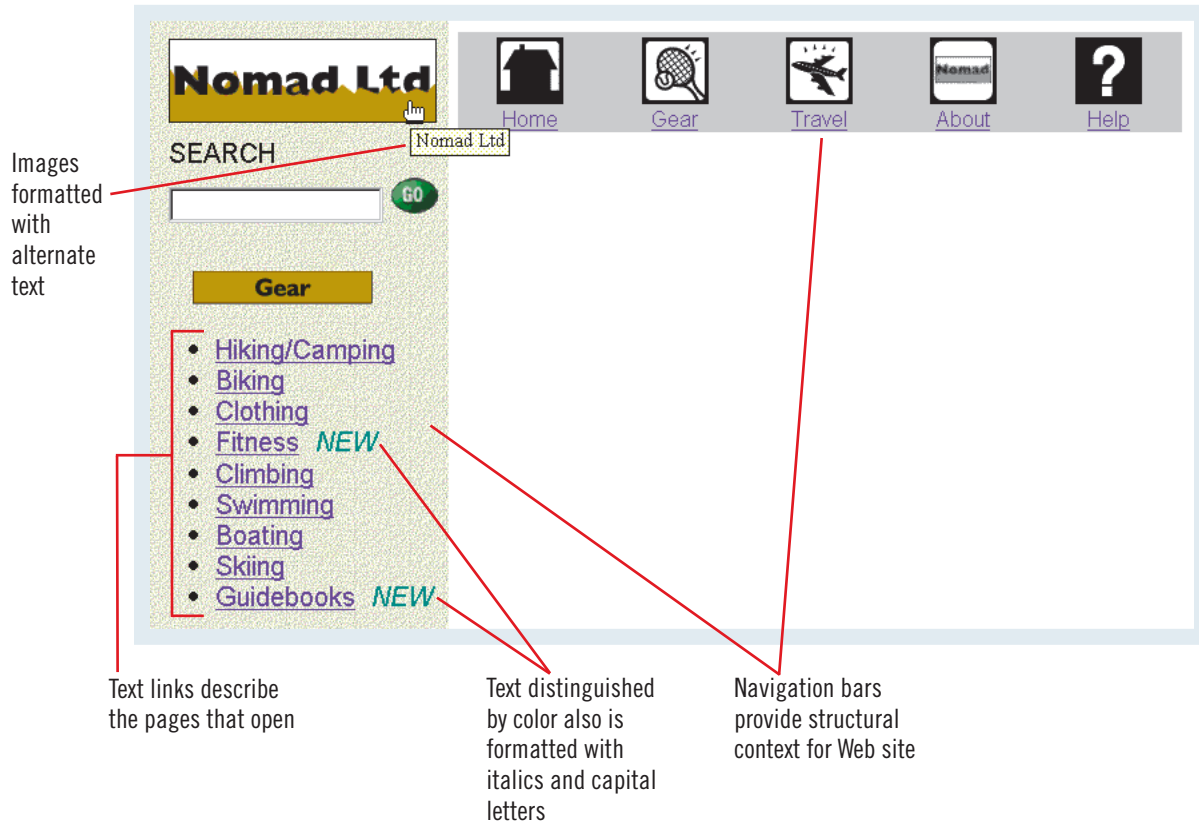
A widely discouraged element of Web page design, and which is slowly disappearing from the Web, is the use of the text "click here" to create a link. Instead, linked text should always describe the contents of the target page. This style guideline is especially important to visually impaired users who might scan a page using the [Tab] key to move from link to link. Each of the text links in both of Jaime's navigation bars describes the contents of the Web page it opens.



Page content is logically organized

Ensuring that your pages contain simple, logical information makes them more accessible to people with cognitive disabilities, as well as to anyone who has difficulty reading. Use headings and ordered and unordered lists to clarify the relationships between page elements. Implementing site-wide navigation tools, such as navigation bars, explicitly denotes the relationship between different Web pages. The two navigation bars that Jaime incorporated into the Nomad template provide a structural context for all pages in the site.

FIGURE G-12: Nomad Web page template




Physical formatting vs. logical formatting

HTML offers more than one tag or tag pair for implementing several types of Web page formats. For example, bold and italic formats each can be coded using two different tag pairs: `..` or `..` for boldface, and `<I>..</I>` or `..` for italic. Although the functions of these tags appear to overlap, they simply illustrate the distinction between the two types of HTML formatting: physical and logical. A tag pair creates **physical formatting** when its sole function is to tell the Web browser to apply a specific visual format. For example, `..` tells the browser only that the marked text should appear in boldface.

Logical formatting, on the other hand, results from tags that mark a page element as fitting a certain function or role. Tags that specify logical format give the browser information on how an element relates to other parts of the Web page, and leave the interpretation and format choice to the user's interface device. `..` is an example of a logical tag pair; it marks text as requiring special attention, but leaves the ultimate format decision to the interface. Logical formatting is an important tool in building accessible Web pages, as it assists different devices in choosing the most appropriate way to convey page contents to the readers.

Exploring Web Writing Guidelines

At first glance, writing text for a Web page seems like a snap: as long as you take the layout differences into consideration, text for the Web should be similar to any other visual medium, right? In reality, several unique aspects of the Web require a markedly different writing style and organization. Because text on a screen is more difficult to read than printed text, users are less comfortable and more impatient reading Web pages. Fortunately, just as there are style guidelines available for printed media, many resources on the Web outline and explain effective writing for an online audience.  Jaime and the other members of the Nomad Web design team researched the topic of writing for the Web, and use the guidelines implemented on the Web page in Figure G-13. These guidelines include:

Details



Keep your writing concise

Because a computer display is a less comfortable medium from which to read, compared to a printed page, it's best to minimize the amount of reading required to convey information. People read more slowly from a screen than from paper. When comparing printed with online text, a rule of thumb is to reduce the number of words by 50% for the online audience.



Avoid long sections of text

One result of the reduced comfort and speed of reading from a computer monitor is that Web users skim most of the text they encounter. As a result, your pages are more useful if they help users find information that's relevant for them. Rather than forcing users to skim—or skip—a long section of text, break it up into several shorter sections, and add a meaningful heading to each. This allows users to quickly identify the main points of the page, and then give a closer reading to any section(s) that seem to match their interests.



Divide text into page-size stand-alone units

Even if you divide information into sections below descriptive headings, you must give attention to the length of text on a single Web page. To allow users to scan and digest the contents of a page, limit the text length to nearly the length of the page. Instead of continuing a single article on additional Web pages, break it up into sections that can stand on their own, and place each on its own page.





Link text that describes its target

In addition to accessibility factors for Web users with disabilities, ensuring that linked text is active is important in making Web text readable. Because linked text stands out from its surroundings on a page, users are more likely to notice it while scanning. Thus, this text should clearly state a specific point, and not be a useless phrase such as “click here.” Eliminating such writing is an excellent way to start reducing the amount of text on your pages, and to ensure that all your text is used as efficiently as possible.

FIGURE G-13: Web page containing writing appropriate for the Web

Site Building

 **The Web Accessibility Initiative**
by [Matt Margolin](#) 10 May 1999

 [Print](#) | [Email](#)
this article for free.

Pages:

- 1 **The Web Accessibility Initiative**
- 2 [Inside Section 508](#)
- 3 [Separating Structure from Content](#)

Page 1

Since the World Wide Web Consortium (W3C) launched the Web Accessibility Initiative in October 1997, designing the Web to be more accessible for people with disabilities has evolved from theory into practice. It seems like a small thing, but over time we may look favorably upon simple tools such as the WAI's authoring checklist as a rare facilitator in the discourse between politics and design.

While the benefits of universal Web design guidelines were hard to imagine way back in '97, real-world implementations were even less

Long article divided into several smaller pages

Link text describes target page contents

Text concise and divided into small paragraphs

Studying Usability Factors

In addition to creating Web pages that are laid out well and convey information, it's important to make sure that your pages are easily usable. While you may come up with a new design idea that seems more user-friendly, you should always ensure that potential users agree with you before implementing it. Like other aspects of design, many resources are available on the Web that analyze aspects of Web page usability. Additionally, usability is a unique area of design because it can be studied and measured. Thus, reviewing some of the available data on what works and what doesn't can be a rewarding investment of time, and can help you design more user-friendly Web sites. Jaime has studied some research, and shares his notes on important factors in Web site usability with the Nomad Web design team. Jaime's guidelines, illustrated in the Web page in Figure G-14, include:

Details



Use a familiar layout

Web design has begun to standardize on the most commonly used design elements. Jakob Nielsen, a Web design usability expert, points out that, "users spend most of their time on *other* sites." Because Web users tend to value speed and efficiency, they usually prefer to use Web page elements—such as toolbars—laid out in a common format that they already understand. Thus, you should balance creativity in your designs with the interface approach found on the most popular Web sites.



Don't rush to implement the latest technology

Often, new developments in HTML or other Web technologies promise to simplify the designer's or the user's experience, or to allow previously impossible functionality in a Web site. However, implementing new technology can be tricky; if it generates errors for users when you first incorporate it into your site, you risk your reputation as a reliable, usable site—and users may not return. You should take the time to familiarize yourself with the technology and its potential drawbacks before using it, and give yourself time to test your implementation before making it available to users. New technology usually comes with compatibility problems, for disabled users as well as for anyone using an older Web browser. Usually, the best response to a new technology is to wait until the Web design community has established its limits and its most appropriate uses.



Minimize download times

Given most Web users' emphasis on speed, impatience is common when waiting for a Web page to download. Large Web pages that contain many screens of text, large graphics, or other technologies that require downloading can result in delays. At best, you annoy your audience; at worst, they give up on your page before it finishes loading, and go somewhere else. One of the keys to minimizing download time is to avoid animations and large graphics on your Web pages, and especially on a site's home page.



Keep information up to date

In order to attract users to regularly return to your Web site, you need to give them reason to trust the site and its contents. A crucial element to building this trust, which is specific to the Web, is to regularly update the site's contents and to include text that specifies the date of your last site update. For example, if you located a Web site containing information on a subject of interest, but then discovered that the site was last updated in 1997, you would probably assume that more recent information might be available, and that you'd do best to continue your search elsewhere.



Test your design

One of the best ways of maximizing the usability of your design is also one of the most obvious: test it. While a well-planned test with different types of people can help you exhaustively analyze your Web site, feedback from even a handful of people can identify major stumbling blocks or an aspect that could markedly improve from some fine-tuning. Remember, however, to test your pages with members of the target audience. Such users are usually not other designers, but rather are people who are less technically adept. Positive reviews from such testers are a good indication that your design is indeed easy to use.

FIGURE G-14: Web page designed for usability

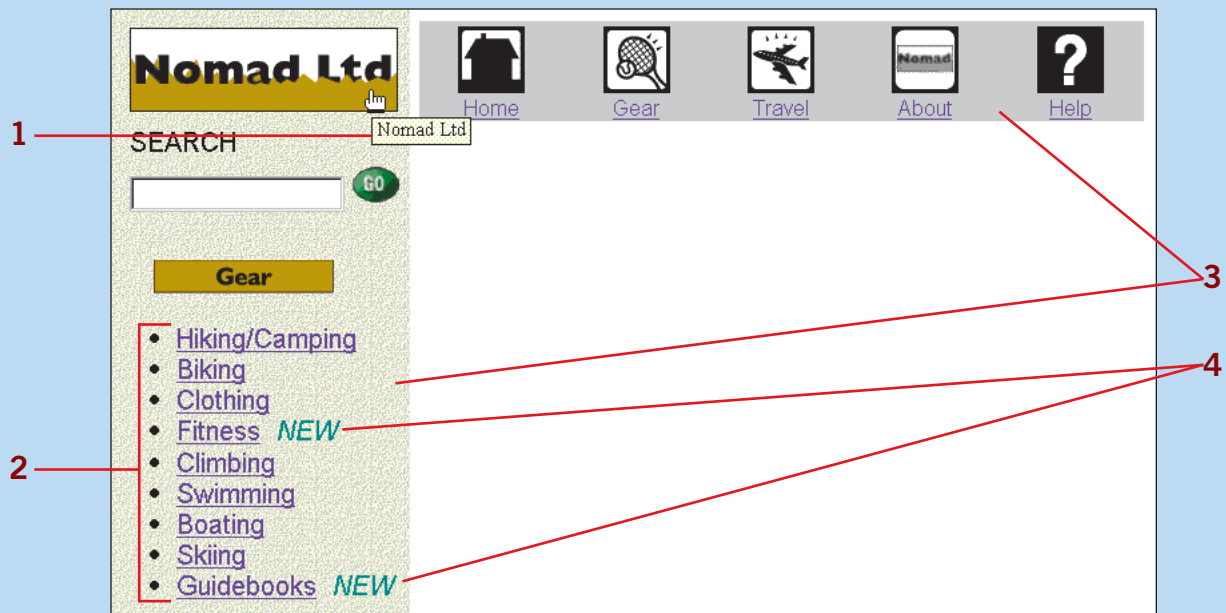


Practice

► Concepts Review

Describe the accessibility value of each page element indicated in Figure G-15.

FIGURE G-15



Match each recommendation with the design principle it describes.

- | | |
|--|-----------------------|
| 5. Reinforce page's message by creating a common theme | a. Active white space |
| 6. Ensure these are complementary, and limited in number | b. Colors and fonts |
| 7. Use this empty zone to deliberately separate page elements | c. Legibility |
| 8. Ensure users can read your page elements by choosing appropriate colors, font sizes, and text/background combinations | d. Style |

Select the best answer from the list of choices.

9. Because of the unique dimensions of a computer monitor, paragraphs of Web page text should appear
- a. Across the entire width of the screen.
 - b. In narrow columns.
 - c. Only at the bottom of a Web page.
 - d. In long paragraphs.
10. You can make a Web site's contents obvious and easily accessible from every page by implementing
- a. A navigation bar.
 - b. White space.
 - c. Forms.
 - d. Frames.
11. You should limit the length of a site's home page to what fits in most users' browser windows because
- a. Users can't view content that doesn't fit in a single screen.
 - b. Audio interfaces for disabled users can't read long Web pages.
 - c. Page content must match the length of the navigation bar.
 - d. You should provide users with a quick way of finding what they're looking for.
12. Which one of the following guidelines helps keep the size of your HTML and associated files as small as possible?
- a. Limit the size and number of graphics.
 - b. Break up long sections of text into shorter paragraphs.
 - c. Ensure the text and background colors are compatible.
 - d. Add links to the text that describes the target page's content.
13. You must schedule and budget regular updates to your Web site in order to
- a. Prevent pages from growing too long.
 - b. Minimize the time users wait for pages to download.
 - c. Maintain users' trust in the site's information.
 - d. Make the site accessible for disabled users.
14. In order to give users with disabilities access to your Web pages, you should
- a. Limit use of linked text.
 - b. Avoid formatting page elements with color.
 - c. Remove graphics from your pages.
 - d. Use HTML code that is as widely interpretable as possible.
15. What is the width of the lowest common screen resolution?
- a. 640 pixels
 - b. 800 pixels
 - c. 1024 pixels
 - d. 1280 pixels
16. The Apple Macintosh and the IBM-compatible PC are virtually indistinguishable to Web page designers, except in which area?
- a. Images
 - b. Link format
 - c. Navigation bars
 - d. Text readability
17. What is a prudent upper limit on the number of text colors and fonts on a Web page?
- a. One
 - b. One or two
 - c. Two or three
 - d. Three or four

18. Which one of the following design strategies is acceptable in an accessible Web page?

- a. Distinguishing page elements from each other based only on color.
- b. Including text whose meaning is clear only visually.
- c. Including a navigation bar for navigation within the Web site.
- d. Positioning page elements haphazardly to create a frenzied style.

19. Which one of the following features should text written for the Web include?

- a. Organization into screen-size pages
- b. The phrase “click here” for links
- c. Long sections of text
- d. Lengthy explanations

20. A usable Web page design should reflect prevalent designs currently in use because

- a. New technologies rarely add new functionality to a Web page.
- b. Users prefer Web page elements in a format that they already understand.
- c. Testing a new design is rarely effective at identifying its weak points.
- d. They don’t need to be reviewed for accessibility compliance.

► Independent Challenges

1. You are evaluating the text content of the Web site you created for your computer consulting business, Star Dot Star. On one page you notice several details that you want to correct.

To complete this independent challenge:

- a. Start your Web browser program, open the file HTM G-2.htm, then consider guidelines for writing for the Web as you explore the page.
- b. Start your text editor, open the file HTM G-2.htm, then save it as a text document with the filename sds-g1.htm.
- c. Remove the text “click here” from the navigation bar, then apply the link format instead to the descriptive text for each item.
- d. Save your work, then save a copy of the page as a text document with the filename sds-g2.htm.
- e. Delete the introductory text for the first list, describing creating Web pages; also delete the contents of the first list.
- f. Change the page heading to “Creating Web sites,” then format this text as centered.
- g. In the introductory paragraph for the remaining list, format the text “creating Web pages” as a link to the Web page “sds-g1.htm.”
- h. Below the list, add the text “See also: Creating Web pages”; format the text “Creating Web pages” as a link to the Web page “sds-g1.htm.”
- i. Save your work, then open the text document sds-g1.htm.
- j. Change the page heading to “Creating Web pages,” then format this text as centered.
- k. Delete the introductory text for the second list, describing creating Web sites, along with the contents of the second list.
- l. Below the list, add the text “See also: Creating Web sites”; format the text “Creating Web sites” as a link to the Web page “sds-g2.htm.”
- m. Save your work, open the file sds-g1.htm in your browser, then click the link at the bottom of the list to open the file sds-g2.htm.

- 2.** You are making accessibility and usability adjustments to the Web site for Crystal Clear Opticals. To complete this independent challenge:

- Start your Web browser, then open the file HTM G-3.htm.
- Start your text editor, open the file HTM G-3.htm, then save it as a text document with the filename cco-g.htm.
- Add the appropriate alternate text to each of the page's graphics.
- In the navigation bar, use the BGCOLOR attribute to add a light-colored background to the cell containing the linked text.
- In the page's main frame, format the text "Eclectic line" at the bottom of the page with a format of your choice, other than text color.
- Save your work, then open the file cco-g.htm in your browser.

- 3.** Researchers have conducted many Web site usability studies in order to pinpoint the factors that positively or negatively affect usability. This information, as well as commentary on it, is widely available on the Web. To better understand the factors that affect a user's interaction with your Web pages, research recent data about the topic of usability that has been published online.

To complete this independent challenge:

- Connect to the Internet and open a Web site that discusses Web page usability, such as one of the following:
www.useit.com
www.usableweb.com
world.std.com/~uieweb

If you have trouble locating these sites, go to www.course.com, navigate to the page for this book, click the link for the Student Online Companion, click the link for this unit, then click one of the links listed there.

- Read the results of research that interests you on one or more sites, then print three results that you find significant.
- For each of the three results you printed, write a paragraph summarizing the finding and its implications, then write a second paragraph or create a sketch showing how you would implement the finding in a Web page design.



- 4.** One of the best ways of learning to design effective Web pages is to critically evaluate other Web pages with less-than-optimal designs. Like all other aspects of Web design, several popular Web sites focus on this topic. To complete this independent challenge:

- Connect to the Internet and open a Web site that spotlights or discusses poorly designed Web pages, such as one of the following:

www.webpagesthatsuck.com
www.usableweb.com
www.spinfrenzy.com/muddies/

If you have trouble locating these sites, go to www.course.com, navigate to the page for this book, click the link for the Student Online Companion, click the link for this unit, then click one of the links listed there.

- View at least five Web sites. As you examine the pages, look for and write down at least three highlighted design errors that you've noticed elsewhere on the Web on other occasions. (Because such scrutiny often prompts a quick redesign of Web sites featured, you may be able to view only an image of the site's previous design, rather than actually use the poorly designed site.)
- For one of the three design errors you noted, note the URL of another site that incorporates the error; print out the other site, then write a paragraph or note on the printout how you would correct the error.

► Visual Workshop

As the Web site designer for Touchstone Booksellers, you are reviewing the site to ensure that it is accessible for disabled Web users. Edit the file HTM G-4.htm so it appears as shown in Figure G-16 to colorblind users and users with monochrome monitors. Save your work with the filename tsb-g.htm.

FIGURE G-16

